Approved SCC #21

C.4.4.5.2 DAP-NAD Equations. A sequence of NADs for each network access period is generated. A subscriber may transmit a message(s) when the time following the Timeout Period equals any one of the terms (NAD values) in the sequence. Equation 1 is used by each subscriber to calculate its DAP-NADs.

Equation 1: $NAD_n = F_n * Net\_Busy\_Detect\_Time + Max(0, F_n-1) * DTETURN$
for n=1 to ∞ ~~4~~

NAD_n is the nth term in the sequence of NADs that are associated with a subscriber during a network access period. Each term (NAD_1, NAD_2, NAD_3, etc.) is a point in time (a delay following the Timeout Period) at which a subscriber may begin transmitting. If a subscriber does not begin transmitting at one term (e.g. NAD_2), it must wait until at least the next term (e.g. NAD_3) before it can begin transmitting. For the DAP-NAD method, the values of the terms calculated by a subscriber will be different than the values of the terms that are calculated by all of the other subscribers (no two subscribers will have terms with the same values). Also, the values of the terms calculated by a subscriber for one network access period will be different than the values of the terms calculated by that subscriber for the next network access period. F_n is nth term in a sequence of factors that, when used in conjunction with DTETURN and Net_Busy_Detect_Time, yields the nth NAD term. F_n is an integer calculated per equation 2.

Equation 2: $F_n = F_1 + (n-1)NS$ for n=1 to ∞ ~~4~~

F_n is the nth term in a sequence of factors. F_1 is the first term in the sequence and is the base from which all the other terms are calculated. It is calculated per equation 3. NS is the number of subscribers on the network and is the common difference between the terms of the sequence. The variable n is an integer and has a range of 1 to infinity.